Article 416

FLOOD HAZARDS

Sections:

110.416.05 Limitations of Liability 110.416.10 Applicability 110.416.15 Areas of Special Flood Hazard 110.416.18 Critical Flood Storage Areas 110.416.20 Compliance 110.416.25 Relation to Other Restrictions 110.416.30 Interpretation 110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals 110.416.80 Penalties for Violations	110.416.00	Purpose
110.416.10 Applicability 110.416.15 Areas of Special Flood Hazard 110.416.18 Critical Flood Storage Areas 110.416.20 Compliance 110.416.25 Relation to Other Restrictions 110.416.30 Interpretation 110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals		
110.416.15 Areas of Special Flood Hazard 110.416.18 Critical Flood Storage Areas 110.416.20 Compliance 110.416.25 Relation to Other Restrictions 110.416.30 Interpretation 110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals		
110.416.20 Compliance 110.416.25 Relation to Other Restrictions 110.416.30 Interpretation 110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals		• • •
110.416.20 Compliance 110.416.25 Relation to Other Restrictions 110.416.30 Interpretation 110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals		Areas of Special Flood Hazard
110.416.25 110.416.30 110.416.35 110.416.35 110.416.40 110.416.45 110.416.50 110.416.50 110.416.55 110.416.57 110.416.57 110.416.60 110.416.60 110.416.60 110.416.65 110.416.70 Construction Standards 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.18	Critical Flood Storage Areas
110.416.30 Interpretation 110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.20	Compliance
110.416.35 Letter of Map Amendment 110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.25	Relation to Other Restrictions
110.416.40 Application Requirements for Permits 110.416.45 Owner/Developer Responsibilities 110.416.50 County Responsibilities 110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.30	Interpretation
110.416.45 110.416.50 110.416.55 110.416.55 110.416.57 110.416.60 110.416.60 110.416.65 110.416.70 Construction Standards 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.35	Letter of Map Amendment
110.416.50 110.416.55 110.416.55 110.416.57 Standards for Subdivision Standards for All Development in Critical Flood Storage Zones Construction Standards Flood Zone Requirements Flood Hazard Reduction: Prohibited Uses and Structures within Floodways Appeals	110,416,40	Application Requirements for Permits
110.416.55 Standards for Subdivision 110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.45	Owner/Developer Responsibilities
110.416.57 Standards for All Development in Critical Flood Storage Zones 110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.50	County Responsibilities
110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.55	Standards for Subdivision
110.416.60 Construction Standards 110.416.65 Flood Zone Requirements 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.57	Standards for All Development in Critical Flood Storage Zones
110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways 110.416.75 Appeals	110.416.60	
Floodways 110,416.75 Appeals	110.416.65	Flood Zone Requirements
110.416.75 Appeals	110.416.70	Flood Hazard Reduction: Prohibited Uses and Structures within
, the same		Floodways
110.416.80 Penalties for Violations	110.416.75	Appeals
	110.416.80	Penalties for Violations

<u>Section 110.416.00 Purpose.</u> The purpose of this article, Article 416, Flood Hazards, is to promote the public health, safety and welfare by establishing guidelines and requirements for the development of property within areas determined to be subject to flood damage.

<u>Section 110.416.05</u> <u>Limitations of Liability.</u> This section provides for limitations of County liability.

- (a) Rationale for Article. The degree of flood protection required by this article is considered reasonable for purposes of complying with the minimum standards required by the Federal Insurance Administration for maintaining eligibility for Washoe County property owners who desire flood insurance, the availability of which, or the rates for which, may be dependent upon the existence of this article, and for maintaining eligibility for the Washoe County area for federal disaster relief.
- (b) Responsibility of Washoe County. The degree of flood protection required by this article is not intended to create a standard or duty of care on the part of Washoe County or any other person or entity related to the design, construction, inspection or maintenance of flood or drainage facilities. This article does not imply that land outside flood hazard areas or uses permitted within such areas will be free from flooding or flood damage. Larger floods can and will occur. This article shall not create liability on the part of Washoe County, any officer or employee thereof or the Federal Insurance Administration, for any flood.

damages that result from reliance on this article or any administrative decision lawfully made thereunder.

- (c) Flood Control Facilities. Nothing in this article may be construed as a determination that any flood or drainage facility is adequate in any respect including, without limitation, adequacy of design, construction, inspection or maintenance Failure of any person or entity to comply with this article is not intended to provide a basis for negligence or any other type of claim for relief; failure to comply has the sole effect of jeopardizing eligibility for federal funding or other federal assistance respecting flood damage or flood insurance
- (d) <u>Property Rights.</u> This article is not intended to alter the rights, obligations or liabilities of property owners who develop real estate in areas subject to this article or in areas subject to flooding. Such legal status shall remain as provided by other law, without reference to this article. The minimum standards of this article do not relieve a property owner of the responsibility to do more than this article requires if more is required to provide adequate protection for the property being developed and for other properties that may be affected
- (e) Severability. This article and the various parts thereof are hereby declared to be severable. Should any section of this article be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the article as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid

[Amended by Ord. 1091, provisions eff. 4/28/00]

<u>Section 110.416.10 Applicability.</u> This article applies to all flood hazard areas, including critical flood storage Zone 1, within the unincorporated areas of Washoe County, pursuant to NRS 543

[Amended by Ord. 1091, provisions eff. 4:28.00. Ord. 1259. provisions eff. 2:4:05.]

Section 110.416.15 Areas of Special Flood Hazard. The flood hazard areas identified by the Federal Insurance Administration through the Federal Emergency Management Agency in a scientific and engineering report entitled "Flood Insurance Study for Washoe County, Nevada, Unincorporated Areas" dated February 1, 1984, with the accompanying Flood Insurance Rate Maps and all subsequent revisions and amendments, are hereby adopted and incorporated into the provisions of this article. The "Flood Insurance Study for Washoe County, Nevada, Unincorporated Areas" with the accompanying Flood Insurance Rate Maps and all subsequent revisions and amendments are on file at the office of the Washoe County Department of Public Works.

[Amended by Ord 1091 provisions eff. 4/28/00 Ord 1356 provisions eff. 12/21/07]

<u>Section 110.416.18 Critical Flood Storage Areas.</u> The Washoe County Department of Water Resources maintains detailed information concerning the Truckee Meadows Flood Plain Storage Zones and critical flood storage Zone 1 identified in Policy 3.1 b of the Washoe County Comprehensive Water Management Plan, as amended These provisions are hereby adopted and incorporated into the provisions of this article.

[Amended by Ord. 1356 provisions eff. 12/21/07]

<u>Section 110.416.20 Compliance.</u> All structures or land constructed, located, extended, converted or altered after August 1, 1984 shall be in full compliance with this article and other applicable laws and regulations

<u>Section 110.416.25</u> Relation to Other Restrictions. This article is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. If those sections or an article of this Development Code or any easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent requirement shall prevail.

<u>Section 110.416.30 Interpretation.</u> In the interpretation and application of this article, all provisions shall be considered as minimum requirements, shall be liberally construed in favor of Washoe County, and shall be deemed to neither limit nor repeal any other powers granted under state or local statute, ordinance or regulation. Definitions contained in Article 920, Definitions for Floodplain Management shall control.

[Amended by Ord. 1356, provisions eff. 12/21/07]

<u>Section 110.416.35 Letter of Map Amendment.</u> If an owner or developer of property believes the property to be inappropriately designated as being in a flood hazard area on the Flood Insurance Rate Maps, appeal may be made to the Federal Emergency Management Agency (FEMA).

- (a) Appeals Procedure. All appeals must be submitted to the Public Works Director for review. The Public Works Director shall transmit the appeals to the Federal Emergency Management Agency for its consideration. Appeals must include the provisions set forth in this subsection and current FEMA regulations.
 - (1) An actual stamped copy of the recorded plat of the property showing official recordation and proper citation, or a photocopy of the property's legal description as shown on the recorded deed (e.g. lot, block and plot number, etc.), together with a photocopy of the appropriate page of the County Assessor's parcel map.
 - (2) A copy of the Flood Insurance Rate Map (FIRM) with the location of the property identified
 - (3) Certification by a Nevada registered engineer or surveyor stating:
 - (i) The type of structure;
 - (ii) The elevation of the lowest adjacent grade (LAG) to the structure, which must be above the base flood elevation; and
 - (iii) The elevation of the top of the lowest floor.
 - (4) When appealing the elevation or boundaries of the base flood, a thorough technical hydrological study, certified by a Nevada registered engineer, of the contributing area which will substantiate the appeal shall be submitted.
 - (5) A signed copy of the statement asserting the accuracy of the information, submitted on the form entitled "Request for Letter of Map Amendment"

(b) Letter of Map Amendment. If the appellant shows that the lowest adjacent grade (LAG) is higher in elevation than the base flood, that the elevation of the base flood is incorrect, or that the boundaries of the base flood are incorrect, the Federal Emergency Management Agency will provide the owner or developer with a Letter of Map Amendment (LOMA) which will exempt the property from the requirements of this article, and which may exempt the owner from the mandatory purchase of flood insurance.

[Amended by Ord. 876 provisions eff. 7/7.93 Amended by Ord 1091 provisions eff. 4/28/00]

Section 110.416.40 Application Requirements for Permits. Any person desiring to construct, locate, extend, convert or alter a structure or alter any land within any flood hazard area must obtain a building permit, grading permit and/or a special use permit. The Washoe County Department of Public Works shall determine whether the proposed development is within any flood hazard area. If the development is within any flood hazard area, the procedures and requirements set forth in Sections 110.416.45 to 110.416.80, inclusive, must be satisfied before either a building permit, grading permit, and/or a special use permit, is issued.

[Amended by Ord. 1091] provisions eff. 4/28/00 [

<u>Section 110.416.45</u> <u>Owner/Developer Responsibilities.</u> The responsibilities of the owner and developer are as set forth in this section.

- (a) <u>Information Requirements.</u> The owner or developer shall submit the information contained within this subsection for review by the Department of Public Works:
 - (1) The elevation of the base flood at each site proposed for development within a flood hazard area;
 - (2) In Zones AE and AH, proposed elevation in relation to mean sea level of the top of the lowest floor of all structures, certified by a Nevada registered engineer or land surveyor; in Zone A and Zone AO, elevation of highest existing grade and proposed elevation of the top of the lowest floor of all structures, certified by a Nevada registered engineer or land surveyor;
 - (3) Proposed elevation in relation to mean sea level to which any structure will be floodproofed, certified by a Nevada registered engineer or land surveyor;
 - (4) Certification by a Nevada registered engineer that the floodproofing methods used for any nonresidential structure meet the floodproofing criteria in Section 110 416.65;
 - (5) Plans for any watercourse proposed to be altered or relocated, which must be designed by a Nevada registered engineer in conformance with the requirements of Washoe County The flood carrying capacity of the unaltered watercourse shall be maintained in the altered watercourse;
 - (6) An operation and maintenance plan for any acceptable flood protection measures (e.g. levees, dams, dikes, reservoirs); and

- (7) Within six (6) months, notify FEMA of changes in the base flood elevation by submitting technical or scientific data to assure that insurance and floodplain management is based on current data.
- (b) Permit Requirement. The owner or developer shall obtain all applicable permits from the State of Nevada Division of State Lands, Nevada Division of Environmental Protection, and all other state and federal agencies. Permits must be obtained before altering or relocating any waterway under the jurisdiction of such agency. A copy of the permit will be provided to the Department of Public Works.
- (c) Certification Requirements. The owner or developer is responsible for compliance with all provisions of this article. Additionally, the owner or developer shall provide the Department of Public Works with "as-built" certification by a Nevada registered engineer or land surveyor as to the elevation requirements or, if floodproofing is a permissible means of compliance, shall provide the Department of Public Works with "as-built" certification by a Nevada registered engineer as to the floodproofing requirements for any applicable nonresidential structure Said certification shall be provided prior to issuance of a Certificate of Occupancy Certification requirements by a Nevada registered engineer or land surveyor as required in this article shall be provided on a FEMA "Elevation Certificate" form. Signing of the Elevation Certificate by a Nevada registered engineer or land surveyor constitutes their assurance that compliance with all requirements of this article have been met

[Amended by Ord. 1091 provisions eff. 428/00. Ord. 1356, provisions eff. 12/21/07.]

<u>Section 110.416.50 County Responsibilities.</u> The responsibilities of the County are as set forth in this section.

- (a) <u>Floodplain Administrator.</u> The Public Works Director or assigned designee is hereby appointed Floodplain Administrator to administer and implement the requirements set forth for the development in the floodplains
- (b) <u>Permit Review.</u> The Department of Public Works shall review all permit applications to determine:
 - (1) That the requirements of Sections 110 416 00 to 110 416 80, inclusive, have been satisfied;
 - (2) That the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point; and
 - (3) That construction methods and practices are utilized to minimize flood damage for all proposed construction and other developments
- (c) <u>Availability of Certifications.</u> The Department of Public Works shall maintain for public inspection and make available as needed for flood insurance policies all certifications required by this article.
- (d) <u>Notification Requirements.</u> The Department of Public Works shall insure that adjacent affected communities and the Nevada Department of Conservation,

Division of Water Planning are notified prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency

- (e) Flood Hazard Area and Critical Flood Storage Zone Delineation. The Department of Public Works shall provide interpretations, where needed, as to the location of the boundaries of the flood hazard areas, critical flood storage zones and the elevation of the base flood, if known
- (f) Flood Elevation Determination. If base flood elevation data have not been provided in accordance with Section 110 416.15, the Department of Public Works shall obtain, review and reasonably utilize any base flood elevation and floodway data available from federal, state or other acceptable sources as criteria for requiring that new construction, substantial improvements or other improvements in flood hazard areas as shown on the existing Flood Insurance Rate Maps meet the standards in Sections 110 416 55 to 110 416 80. If deemed necessary by the Department of Public Works, the owner or developer may be required to provide an engineered hydrological study to determine the base flood flow and elevations
- (g) <u>Availability of Plans.</u> The Department of Public Works shall maintain on file all operation and maintenance plans submitted by the developer for every acceptable flood protection measure

[Amended by Ord 1091, provisions eff 4:28:00, Ord. 1259 provisions eff. 2:4:05, Ord. 1356, provisions eff. 12:21:07]

<u>Section 110.416.55</u> <u>Standards for Subdivision.</u> The standards for subdivisions subject to flood damage are as set forth in this section.

- (a) All new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than fifty (50) lots or five (5) acres, shall provide base flood elevation data
- (b) All subdivision improvement plans shall identify the flood hazard area, the elevation of the base flood, and the elevation of every proposed structure, pad and adjacent grade If the site is filled above the base flood, the final pad elevation shall be certified by a Nevada registered engineer or land surveyor and provided to the Department of Public Works
- (c) All subdivision proposals shall be consistent with the need to minimize flood damage.
- (d) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage
- (e) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
- (f) No subdivision improvement shall be placed in a floodway, except as provided in Section 110 416 70.

[4mended by Ord 1091 provisions eff 4/28/00]

<u>Section 110.416.57 Standards for All Development in Critical Flood Storage Zones.</u> The standards for development in critical flood storage zones are set forth in this section.

- (a) Any activity that decreases the volume of flood storage in Zone 1 shall be prohibited
- (b) All development located in critical flood storage Zone 1 shall provide compensatory storage at a one to one (1:1) ratio on the project site, or in a hydrologically connected basin, as determined by the Department of Public Works
- (c) Compensatory storage may be, but is not required to be, hydrologically connected to on-site drainage designs required under Article 420 of the Development Code
- (d) No critical facilities will be allowed in critical flood storage Zone 1
- (e) Compensatory storage on a one to one (1:1) ratio may be allowed in an existing hydrologically connected regional storage mitigation facility determined adequate by the Department of Public Works.

[Added by Ord. 1259, provisions eff. 2 4:05]

<u>Section 110.416.60 Construction Standards.</u> In all flood hazard areas, the required minimum standards for construction materials and methods are set forth in this section. The terms (as defined by FEMA) are set forth in Article 920.

- (a) All Construction. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy; and be elevated on stemwalls, pilings, columns or armored fill so that the top of the lowest floor is elevated in conformance with provisions of Section 110 416.65, Flood Zone Requirements
- (b) <u>Manufactured Homes.</u> All manufactured homes shall meet the anchoring standards of Section 110 416.65, Flood Zone Requirements.
- (c) <u>Materials.</u> All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (d) Methods. All new construction and substantial improvements shall use methods and practices that minimize flood damage; and provide adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures.
- (e) Mechanical and Electrical. All elements that function as part of the structure (such as furnace, water heater, air conditioner and other electrical equipment) shall be elevated to one (1) foot or more above the base flood elevation or depth number specified on the Flood Insurance Rate Maps or shall be designed and/or located so as to prevent water from entering or accumulating within components during conditions of flooding
- (f) <u>Methods of Hydrostatic Equalization.</u> All new construction and substantial improvements, which have fully enclosed areas below the lowest floor that are

subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement shall be certified by a Nevada registered engineer and must meet or exceed the provisions of this subsection.

- (1) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
- (2) The bottom of all openings shall be no higher than one (1) foot above original grade. Openings may be equipped with screens, louvers or other cover devices, provided that they permit the automatic entry and exit of floodwaters
- (3) The exterior walls of all new construction and substantial improvements which have fully enclosed areas below the lowest floor that are subject to impact forces and drag forces shall also be designed by a Nevada registered engineer to withstand these and all hydrodynamic flood forces
- (g) <u>Utilities.</u> The construction standards for utilities shall be as set forth below:
 - (1) Water and Wastewater Systems. All new and replacement water supply and sanitary sewerage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from systems into floodwaters
 - (2) <u>On-site Systems.</u> On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding
- (h) <u>Crawlspace Construction.</u> All new construction and substantial improvements, which have fully enclosed areas below the lowest floor and below the lowest adjacent exterior grade (for frost protection) shall be constructed in accordance with FEMA Technical Bulletin 11-01 and subsequent revisions

[Added by Ord 922 provisions eff retro to 9/30/94 Amended by Ord 1091 provisions eff 4/28/00; Ord 1356, provisions eff. 12/21/07]

<u>Section 110.416.65 Flood Zone Requirements.</u> In all flood hazard areas, elevation and floodproofing standards shall be in accordance with the provisions of this section Elevations shall be certified by a Nevada registered engineer or land surveyor

- (a) Zones AE and AH Requirements. In Zones AE and AH, new construction and substantial improvement of any structure shall have the top of the lowest floor (including basement floor) elevated to one (1) foot or more above the base flood elevation unless the construction of a crawlspace is in accordance with Section 110 416 60(h) Nonresidential structures must meet the standards in subsection (f) of this section
- (b) Zone AO Requirements. Zone AO, areas subject to alluvial fan flooding, have irregular flow paths that result in erosion of existing channels and the undermining of fill material. In every such zone, the provisions of this subsection shall be met.

- (1) All structures must be securely anchored to minimize the impact of the flood and sediment damage.
- (2) New construction and substantial improvement to any structure shall have the top of the lowest floor (including basement floor) elevated to at least one (1) foot above the depth number specified on the Flood Insurance Rate Maps unless the construction of a crawlspace is in accordance with Section 110.416.60(h). Nonresidential structures must meet the standards in subsection (f) of this section.
- (3) Use of all fill materials must be armored to protect the material from the velocity of the flood flow.
- (4) All proposals for subdivision development must provide a mitigation plan that identifies the engineering methods used to:
 - Protect structures from erosion and scour caused by the velocity of the flood flow; and
 - (ii) Capture or transport flood and sediment flow through the subdivision to a point of deposition that will not create a health or safety hazard
- (c) Zone A Requirements. In an unnumbered Zone A, new construction and substantial improvement to any structure shall have the top of the lowest floor (including basement floor) elevated to either of the standards in this subsection unless the construction of a crawlspace is in accordance with Section 110.416.60(h). Non-residential structures must meet the standards in subsection (f) of this section
 - (1) A height of at least two (2) feet above the highest adjacent undisturbed ground elevation if no base flood elevation has been determined; or
 - (2) A height of at least one (1) foot above the base flood elevation as determined by an engineered hydrological study provided by the owner or developer, if deemed necessary by the Department of Public Works.
- (d) <u>Fabricated Housing Requirements</u>. All fabricated homes, as specified in Article 312, Fabricated Housing, and additions to fabricated homes shall be constructed using methods and practices in conformance with subsections (a), (b) or (c) of this section to minimize flood damage. Fabricated homes will be set on a securely anchored permanent foundation system to resist flotation, collapse and lateral movement. The foundation shall be designed by a registered engineer
- (e) Recreational Vehicle Requirements. All recreational vehicles placed on sites within Zones A, AH, AE and AO shall meet the following requirements:
 - Be on site for fewer than one hundred eighty (180) days;
 - Be fully licensed and ready for highway use; or
 - (3) Meet the standards in subsection (d) of this section.

- (f) Nonresidential Requirements. Nonresidential construction shall either be elevated in conformance with subsection (a), (b), or (c) of this section, or together with attendant utility and sanitary facilities, be floodproofed to the same appropriate elevations as the top of the lowest floor elevations as indicated in subsection (a), (b), or (c) of this section. All floodproofing measures shall be designed by a Nevada registered engineer. Examples of floodproofing include, but are not limited to:
 - Installation of watertight doors, bulkheads and shutters;
 - (2) Reinforcement of walls to resist water pressure;
 - (3) Use of paints, membranes or mortars to reduce seepage through walls;
 - (4) Addition of mass or weight to the structure to resist flotation; and
 - (5) Armor protection of all fill materials from scour and erosion.
- (g) Attached or Detached Garage Requirements. All garages, attached or detached, shall either be elevated in conformance with subsection (a), (b) or (c) of this section or shall provide for hydrostatic equalization in accordance with Section 110.416 60(f)

[Renumbered and renamed from Section 110.416.70 entitled 'Construction Standards. Elevation and Floodproofing and amended by Ord 922, provisions eff retro to 9/30/94. Amended by Ord 1091 provisions eff. 4/28/00. Ord 1356 provisions eff. 12/21/07]

Section 110.416.70 Flood Hazard Reduction: Prohibited Uses and Structures within Floodways.

- (a) <u>Prohibited Floodway Encroachments.</u> Every new encroachment, including fill, new construction, substantial improvement and other development, is prohibited in a designated floodway, except as provided in subsection (b) of this section
- (b) Exceptions. Improvements may be allowed in the floodway if it is demonstrated through hydrologic and hydraulic analysis and certified by a Nevada registered engineer that the proposed improvements will not result in any increase in flood levels during the occurrence of the base flood discharge, and that the improvements meet the standards in Sections 110.416.55 to 110.416.65 inclusive.

[Renumbered from 110 416 80 by Ord. 922, provisions eff. retro to 9:30.94. Amended by Ord. 1091, provisions eff. 4/28/00.]

Section 110.416.75 Appeals. Appeals shall be as set forth in this section

- (a) <u>Appeals for Variances.</u> The Board of County Commissioners shall hear and decide appeals and requests for variances from the requirements of this article.
- (b) Appeals for Errors. The Board of County Commissioners shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination.

- (c) <u>Appeals Considerations.</u> In passing upon such applications, the Board of County Commissioners shall consider all technical evaluations and all relevant requirements, factors and standards specified in this article and shall also consider the provisions of this subsection:
 - (1) The danger that materials may be swept onto other lands to the injury of others:
 - (2) The danger to life and property due to flooding or erosion damage;
 - (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (4) The importance of the services provided by the proposed facility to the community;
 - (5) The necessity to the facility of a waterfront location, where applicable;
 - (6) The availability of alternative locations that are not subject to flooding or erosion damage and would suffice for the proposed use;
 - (7) The compatibility of the proposed use with existing and anticipated development;
 - (8) The relationship of the proposed use to the Comprehensive Plan and floodplain management program for that area;
 - (9) The safety of access to the property in times of flood, for ordinary and emergency vehicles;
 - (10) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters expected at the site; and
 - (11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities (such as sewer, gas, electrical and water systems, and streets and bridges)
- (d) <u>Issuance of Variance.</u> Variances shall only be issued when in compliance with the provisions of this section.
 - (1) A showing of good and sufficient cause such as renovation, rehabilitation or reconstruction. It is not good and sufficient cause for a variance to be issued upon the basis of economic considerations, aesthetics or because variances have been used in the past.
 - (2) A determination that failure to grant the variance would result in exceptional hardship to the applicant
 - (3) A determination that the granting of a variance will not result in additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization to the public, or conflict with existing local laws or ordinances.

- (e) Extent of Variance. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (f) <u>Conditions of Variance.</u> Upon consideration of the factors set forth in subsection (c) of this section and the purpose of this article, the Board of County Commissioners may attach such conditions to the granting of variances as it deems necessary to further the purpose of this article.
- (g) <u>Historic Resources.</u> Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in this section.
- (h) <u>Increase in Flood Levels.</u> Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- Written Notice. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance may be commensurate with the increased risk resulting from the reduced lowest floor elevation. The variance does not remove the obligation by the owner to keep and maintain flood insurance
- (j) Responsibilities of Department of Public Works. The Washoe County Department of Public Works shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

[Remimbered from 110 416 85 by Ord 922 provisions eff retro to 9:30/94 Amended by Ord 1091 provisions eff 4.28/00]

<u>Section 110.416.80 Penalties for Violations.</u> Any violation of this article shall be enforced as provided in Chapters 110 and 125 of the Washoe County Code, including without limitation prosecution as a misdemeanor

[Renumbered from 110 416 90 by Ord 922, provisions eff retro to 9/30/94, Amended by Ord 1356 provisions eff. 12/21/07]

[Previous Section 110.416.60 entitled 'Construction Standards Anchoring' amended by Ord. 876, provisions eff. 7.7.93 repealed by Ord. 922, provisions eff. retro to 9.30.94. Previous Section 110.516.65 entitled 'Construction Standards. Materials and Methods' repealed by Ord. 922 provisions eff. retro to 9.30.94. Previous Section 110.416.75 entitled 'Construction Standards Utilities repealed by Ord. 922 provisions eff. retro to 9.30.94. Previous Map. 110.416.18.1 entitled 'Truckee Meadows Flood Plain Storage Zones' added by Ord. 1259. provisions eff. 2.4.05 was repealed by Ord. 1356. provisions eff. 12/21/07.]